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Marianne Boland
Marianne Boland

In Re Application of:

Bremer et al.

Group Art Unit: 2643

Serial No.: 09/645,206

Examiner: Barnie, Rexford N.

Filed: August 25, 2000

Docket No.: 061607-1300

For: **SYSTEM AND METHOD FOR PREMISES END CROSSTALK COMPENSATION**

The following is a list of documents enclosed:

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Transmittal Form
Response to Examiner's Answer (in Triplicate)

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Filing Date	August 25, 2000
First Named Inventor	Bremer
Art Unit	2643
Examiner Name	Barnie, Rexford N.
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2643

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In Re Application of:)	
)	
Bremer <i>et al.</i>)	Art Unit: 2643
)	
Serial No.: 09/645,206)	Examiner: Barnie, Rexford N.
)	
Filed: 08/25/2000)	Docket No. 061607-1300
)	
For: System and Method for Premises End)	
Crosstalk Compensation)	

RESPONSE TO EXAMINER'S ANSWER

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Sir:

This is a Response to an Examiner's answer filed by Examiner Rexford N.

Barnie, sent on *January 4, 2005*.

I. GROUPING OF CLAIMS

The Examiner's Answer maintains the rejection that claims 1-65 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. Appellants concur with this interpretation that the claims stand or fall together in one group.

Appellants wish to emphasize that claims 1-65 stand or fall together only with respect to the rejection of these claims as made in the Final Office Action. In the Final Office Action, claims 1-65 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over admitted prior art (Fig. 2) in view of *Sciacero et al.* (U.S. Patent 5,502,391), hereinafter *Sciacero*, or *Arnett et al.* (U.S. Patents 6,186,834 or 6,176,742), hereinafter *Arnett '834* and *Arnett '835*, respectively, and further in view of *Agazzi et al.* (U.S. Patent 4,669,116), hereinafter *Agazzi*.

Accordingly, if the Board concludes that the above-rejection is improper because *Agazzi* fails as a reference, then Appellants assert that the final rejection of claims 1-65 should be overruled and withdrawn by the Board. However, if other grounds of rejection are asserted, claims 1-65 may or may not stand or fall together. Such rejections have not been asserted in any Office Action, and accordingly, are not at issue in this Appeal.

II. RESPONSE TO EXAMINER'S ANSWER

A. Allegation that Appellants have Attacked only One of the References

At page 8, the Answer disagrees with the Appellants' arguments "because the appellant has attacked the explanation as set forth in the rejection of the claimed subject matter based solely on the 'Agazzi' reference." Appellants disagree.

Appellants have argued the proposed combination with respect to the salient issues pertaining to patentability of the claims.

At page 8, the Answer states that “‘Arnett’ fails to teach a relay mechanism to selectively activate capacitors.” Appellants concur with this characterization of *Arnett*’s failure to teach, disclose or suggest this particular feature of the independent claims.

The Final Office Action, at page 1, alleges that “Sciacero et al. teaches an apparatus for measuring the crosstalk in a cable associated with a network by using capacitive circuit for the purpose of reducing crosstalk caused by coupling effect in (see fig. 3b, col. 3 lines 12-17, col. 5).” Here, the Final Office Action correctly interprets *Sciacero* as teaching an apparatus for measuring the crosstalk. The Final Office Action concludes that *Sciacero* is limited to measuring crosstalk, and therefore fails to disclose, teach or suggest the above-noted features of the independent claims.

Appellants then describe in great detail how the *Agazzi* reference fails to disclose, teach or suggest the features of “a plurality of compensating capacitive devices; and a plurality of switches, each uniquely coupled to one of said capacitive devices ... such that when at least one of said switches are actuated by said processor, said corresponding compensating capacitive device is connected between two conductors of a four conductor system, such that said compensating capacitive device reduces an undesirable crosstalk signal” as recited in independent claim 33, for example.

Summarizing, the above-noted features of the independent claims are not disclosed in *Arnett*, *Sciacero* or *Agazzi*. This failure to disclose, teach or suggest by the proposed combination of references used in the Final Office Action the above-noted

features of the independent claims is either admitted by the Final Office Action or is argued by the Appellants.

Appellants then argue that “because *Agazzi* fails to teach what is alleged, the proposed combination fails to teach, disclose or suggest the each and every limitation of the claimed invention. Since each and every limitation of the rejected claims 1-65 are not taught, disclosed or suggested in the proposed combination of references used in the Final Office Action to reject claims 1-65, for this reason alone, the requisite *prima facie* case of establishing obviousness has not been made. Thus, claims 1-65 are not obvious under proposed combination, and the rejection of the claims 1-65 should be withdrawn.” (Appellants’ Appeal Brief at page 24.) Therefore, Appellants have argued the proposed combination of the references. Accordingly, the Answer’s characterization that the “appellant has attacked the explanation as set forth in the rejection of the claimed subject matter based solely on the ‘*Agazzi*’ reference” is incorrect.

B. First Time Allegation that Sciacero Allegedly Teaches Reducing Cross-talk

At page 9, the Answer alleges that “‘*Sciacero et al.*’, a secondary reference applied teaches cross-talk compensation means in (see fig. 3B, fig. 3D, fig. 7 and other figs.) wherein a cross-talk circuit or compensation means can provide selective connection of cancellation capacitors in (see col. 3 lines 57-59) in communication networks/systems including LAN with interference caused by mutual coupling. Furthermore, (see col. 5 line 42-col. 6 line 4), *Sciacero teaches selectively activating relays in conjunction with capacitors under control of a switching matrix to reduce crosstalk.*” (Emphasis added. Also, note that typographical errors in the above quotation are made on the part of the Answer.) Then, the Answer alleges at page 9

that the “combination including the admitted prior art and Sciacero meets the claimed limitation without the need for Agazzi.”

Appellants’ observe that the above allegation that “Sciacero teaches selectively activating relays in conjunction with capacitors under control of a switching matrix to reduce crosstalk” is being made for the first time in the Examiner’s Answer. No prior Office Action has ever rejected any pending claim under 35 U.S.C. §103 using a proposed combination of allegedly admitted prior art in view of *Sciacero*.

Then, the Answer asserts at page 9 that “the appellant failed to address the reference ‘Sciacero’ based upon the arguments resented in the appeal brief.”

This above assertion by the Answer is a fair characterization of the Appellants’ appeal brief. The reason the Appellants did not address in the Appeal Brief the argument that “Sciacero teaches selectively activating relays in conjunction with capacitors under control of a switching matrix to reduce crosstalk” is because this rejection has never been asserted against the claims. Since this rejection is only now being asserted for the first time, it was not possible for the Appellants to address this allegation in their Appeal Brief (or in any of the Appellants’ Responses to the original Office Actions).

Appellants note that the Examiner’s Answer, under rule §41.39, is permitted to raise a new grounds of rejection. However, Appellants further note that nowhere in the Examiner’s Answer is there a proper designation that a new grounds of rejection are being asserted in the Examiner’s Answer to the Appellants’ Appeal Brief.

C. Appellants Elect to Maintain the Appeal

Rule §41.39, Examiner's Answer, indicates that "if the examiner's answer contains a rejection designated as a new ground of rejection, appellant must within two months from the date of the examiner's answer exercise one of the following two options ... (1) Reopen prosecution .. or (2) Maintain appeal." Appellants elect to maintain the appeal.

Rule §41.39 then indicates that to maintain the appeal, a Reply Brief must be filed and "must address each new ground of rejection as set forth in §41.37(c)." Appellants provide the mandated response addressing the new grounds of rejection hereinbelow.

D. Examiner's Response to Appellants' Arguments Regarding Agazzi

1. Argument that Agazzi Fails to Teach Mismatches in Mutual Coupling

The Answer at page 9 states that the "appellant argued in (see page 17-18) that the prior art of record Agazzi applied fails to teach mismatches in mutual coupling created with other conductors or in order words cross-talk compensation induced by another wire pair onto another wire." (Appellants note that typographical errors in the above quotation are made on the part of the Answer.) The Answer responds by stating that the "examiner disagrees because (see col. 1 lines 17-21) teaches interference caused by one transmission channel onto another channel in (see fig. 1) thus needing a cross-talk compensation circuit (echo-canceller) to remove cross-talk."

As with the entire prosecution of this case, the Answer has again misconstrued the teachings of *Agazzi* and has misinterpreted how the cited art applies to

communication technologies. For the convenience of the Board, the above-recited portion of *Agazzi* is repeated below:

The purpose of an echo canceller is to remove “near-end cross-talk” or “echo” signal which feeds through the hybrid into the local receiver, interfering with the data signal coming from a distant transmitter.
(Col. 1 lines 17-21)

The Answer is, with its interpretation of *Agazzi*, demonstrating a fundamental lack of understanding in basic communication technologies. “Near-end cross-talk” (or echo, as is commonly referred to in the arts) is simply not the same as the type of cross-talk that is well known to be the result of “interference caused by one transmission channel onto another channel.”

The fundamental difference in the two types of interference is so well understood in the arts that one with even a basic understanding of communication technologies will appreciate the differences. Appellants fail to understand why the Answer continues to misapply basic electronic communication theory to create an artificial justification for continued rejection of the claims using unrelated art. Any basic electrical theory reference or any basic communications technology reference would clarify the fundamental differences between “near-end cross-talk” (or echo) and “interference caused by one transmission channel onto another channel.”

Apparently, the Answer is comparing Appellants’ use of the term “cross-talk” (interference caused by one transmission channel onto another channel) and the *Agazzi* reference to “near-end cross-talk” (echo). Then, the Answer apparently draws the conclusion that because of the common word, namely “cross-talk”, the two terms are the same. Even though both terms have a common word, the terms are technically different and are used to define entirely distinct electrical phenomena encountered in

the communication technology arts. Thus, the Answer's conclusion that these two terms are the same is simply not correct.

Referring to *Agazzi* Fig. 1, the Board is directed to the illustrated components, namely the "2 wires" identified by reference numeral 12. This is a wire pair commonly used in the telecommunications industry for communication of signals. However, the Answer asserts that *Agazzi* Fig. 1 illustrates "interference caused by one transmission channel onto another channel." Again, the Answer is fundamentally misinterpreting *Agazzi* Fig. 1. A person skilled in the art would appreciate that the "2 wires" in *Agazzi* Fig. 1 corresponds to one communication channel. That is, ***only one communication channel*** is illustrated in *Agazzi* Fig. 1. Accordingly, the Answer's assertion that *Agazzi* Fig. 1 illustrates "interference caused by one transmission channel onto another channel" is incorrect because only one channel is illustrated in *Agazzi* Fig. 1.

Summarizing, at page 9 of the Examiner's Answer, the Answer's disagreement with the Appellants' assertion that *Agazzi* fails to teach cross-talk compensation induced by one transmission channel onto another channel is based on a misapplication of the communication arts and a failure to appreciate what precisely *Agazzi* is, in fact, teaching. Since only one channel is disclosed in *Agazzi*, it is impossible for *Agazzi* to teach anything regarding multiple channels, and in particular, it is impossible for *Agazzi* to teach anything regarding mismatches in mutual coupling created by other channels, or in other words, interference caused by one transmission channel onto another channel.

2. Answer's Continued Improper Inferences Regarding *Agazzi* Fig. 3

The Answer at page 10 then asserts that *Agazzi* “does not need to detail all the functionalities associated with its echo-canceller elements because the examiner believes the circuit is self explanatory. According to *Agazzi*, its echo canceller shown in (see fig. 3) serves to control or reduce cross-talk, noise or echo signal.”

The Board is respectfully referred to *Agazzi* Fig. 3. *Agazzi* illustrates switches, capacitors, an amplifier and the “Shr + Switch Control Logic” in Fig. 3. The Fig. 3 portions identifying switches, capacitors and amplifiers are illustrated below for the convenience of the Board.



Switches



Capacitors



Amplifier

Many uses of switches, capacitors and amplifiers are well known in the art of electrical engineering. For instance, capacitors may accumulate charge, isolate direct current (DC) components from propagating over a connection, or modify impedance characteristics of a circuit. Or, as in the case of the present invention, the capacitors reduce “an undesirable crosstalk signal” (as recited in the claims) since capacitors are known to provide compensation (for example, see Appellants’ Specification, at Page 15, line 29 to page 16, line 11; also see *Arnett*, at Col. 2, line 13-27).

At issue is the Answer’s subjective interpretation of *Agazzi* Fig. 3 based upon mere visual inspection of the figure. As note above, the Answer takes the position that “the examiner believes the circuit is self explanatory.”

Appellants contend that *Agazzi* Fig. 3 is not self explanatory. Here, both *Agazzi* Fig. 3 and the Appellants’ specification describe complex electrical circuits that employ switches and capacitors. The Board is referred to Appellants’ Figs. 6-13. There is, at most, superficial similarity to the manner in which the Appellants’

capacitors and switches are coupled and the manner in which the *Agazzi* Fig. 3 capacitors and switches are coupled.

The Board is respectfully referred to *Agazzi* Fig. 3 to see that the *Agazzi* capacitors are coupled to switches on one side. The *Agazzi* capacitors, on the other side, are coupled to the “-” input of the amplifier, are coupled to another capacitor (that couples to the output of the amplifier), and are further coupled to another capacitor that is switchable to the “INPUT SIGNAL” shown in *Agazzi* Fig. 3.

The Board is further referred to *Agazzi* Fig. 3 which illustrates that the *Agazzi* switches are coupled to the “S/H” blocks. These S/H blocks are coupled to the “D/A” block and the “COUNTER & DECODER” block.

Furthermore, the Board is further referred to *Agazzi* Fig. 3 which does not illustrate any of the communication channels. *Agazzi* Fig. 3 shows that received data (DATA IN) is processed by the complex circuitry, and that the processed data is output (INPUT SIGNAL). There are simply no communication channels illustrated anywhere in *Agazzi* Fig. 3. Thus, Appellants maintain that *Agazzi* Fig. 3 does not, by itself, disclose anything relevant to the features of “a plurality of compensating capacitive devices; and a plurality of switches, each uniquely coupled to one of said capacitive devices ... such that when at least one of said switches are actuated by said processor, said corresponding compensating capacitive device is connected between two conductors of a four conductor system, such that said compensating capacitive device reduces an undesirable crosstalk signal” as recited in independent claim 33, for example.

Accordingly, Appellants maintain that the circuit of *Agazzi* Fig. 3 is very complex. Appellants fail to appreciate how the Answer can take the position that the *Agazzi* Fig. 3 “circuit is self explanatory” when the connections and the components

of *Agazzi* Fig. 3 are so different from the connections and the components of Appellants' Figs. 6-13. Appellants maintain that it is improper for the Answer to conclude that *Agazzi* Fig. 3 circuitry is so "self explanatory" so as to have relevance to Appellants' invention without consideration of the *Agazzi* Specification in its interpretation of *Agazzi* Fig. 3.

Appellants maintain that for the Answer to interpret *Agazzi* Fig. 3 without consideration of the *Agazzi* Specification, the Answer must assume facts that are not of record. That is, the Answer must make inferences to interpret the complex circuitry of *Agazzi* Fig. 3. Appellants assert that such unsupported inferences made by the Answer is improper.

Furthermore, Appellants maintain that the inferences drawn by the Answer regarding *Agazzi* Fig. 3 are contrary to the teachings of the *Agazzi* Specification. Appellants went to great lengths in their Appeal Brief to demonstrate what the *Agazzi* Specification expressly taught with respect to the capacitors and switches of *Agazzi* Fig. 3. The express teachings of the *Agazzi* Specification are contrary to the Answer's inferences regarding *Agazzi* Fig. 3 which is based upon an assertion that the *Agazzi* Fig. 3 "circuit is self explanatory."

For brevity, the Appellants do not again repeat here what the *Agazzi* Specification expressly teaches regarding the capacitors and switches illustrated in *Agazzi* Fig. 3. The Board is respectfully referred to the Appellants' Appeal Brief, or *Agazzi* itself, for this information.

3. Answer Mischaracterizes *Agazzi*

The Answer at page 10 asserts that "according to *Agazzi*, its echo canceller shown in (see fig. 3) serves to control or reduce cross-talk, noise or echo signal."

Literally, the Answer is making a true statement here. However, in context, the Answer is mischaracterizing *Agazzi* in the above statement for at least the following reasons.

The Answer correctly asserts that *Agazzi* discloses an “echo canceller, shown in (see fig. 3).” Furthermore, the Answer correctly asserts that the “echo canceller shown in (see fig. 3) serves to control or reduce near-end crosstalk, noise or echo signal.”

However, echo canceling (reducing near-end crosstalk) has nothing to do whatsoever with the various embodiments of the present invention, which are directed to features of “a plurality of compensating capacitive devices; and a plurality of switches, each uniquely coupled to one of said capacitive devices ... such that when at least one of said switches are actuated by said processor, said corresponding compensating capacitive device is connected between two conductors of a four conductor system, such that said compensating capacitive device reduces an undesirable crosstalk signal” as recited in independent claim 33, for example. Echo canceling taught by *Agazzi* is fundamentally different than the reduction in crosstalk effected by various embodiments of the present invention.

Accordingly, Appellants assert that the above-statement made by the Answer is misleading to the Board by its equating of the *Agazzi* echo cancellation with compensating capacitive devices which reduce an entirely different type of crosstalk (interference caused by one transmission channel onto another channel).

Then, the Answer states, in reference to *Agazzi* Fig. 3, “all its elements including the capacitors with its relay and the switch cross logic serves to provide cross-talk reduction or compensation.” It is true that *Agazzi* Fig. 3 discloses, with all of its elements, a system that provides cross-talk reduction. However, as noted above,

Agazzi is limited to reducing *near-end* cross-talk. The phrase “near-end” has been conveniently omitted by the Answer, and accordingly, Appellants assert that the above-statement made by the Answer is misleading to the Board by its equating of the *Agazzi* echo cancellation with compensating capacitive devices of the present invention which reduce an entirely different type of crosstalk

Furthermore, the above assertion by the Answer that “all its elements including the capacitors with its relay and the switch cross logic serves to provide ... *compensation*” is not a true characterization of *Agazzi*. *Agazzi* does not disclose, teach or suggest anywhere any aspect of compensation provided by capacitors. However, the above statement made by the Answer would lead the Board to believe that *Agazzi* discloses compensation provided by capacitors.

Also, the Appellants assert that the Answer is selectively lifting out the illustrated *Agazzi* capacitors and switches, leaving behind the other necessary components which operate on the received *Agazzi* data (see DATA IN), and inserting the selected *Agazzi* capacitors and switches (without the other *Agazzi* components which are, in fact, providing the reduction in near-end crosstalk) into the *Arnett* system to arrive at the Appellants’ invention. Appellants assert that the above-statement made by the Answer is misleading to the Board because of its inherent omission of the other *Agazzi* components (S/H, Counter & Decoder, D/A, A/D, Error Register, Adder, Memory and Latch components) which are, in fact, providing the reduction in near-end crosstalk.

Next, the Answer at page 10 states that the “switches would either be in a closed mode or an open mode, which by nature is how it functions. Furthermore, the mode in which the switch stays either closed or open is in part controlled by switch control logic.” It is true that switches operate as described in the Answer. However,

the Answer goes further and states at page 10 that the “appellant has questioned the functionality of a switch control logic because according to the appellant, it’s not explicitly defined in the disclosure of *Agazzi* but the examiner’s position is that the switch control logic would control the switch to open or close.” The Answer is missing the whole point of the Appellants’ line of questioning. Of course, the switch control logic operates to open or close switches. The real issue is on what basis is the switch control logic operating to determine switch opening/closing? That is, why are the switches opening and closing in *Agazzi*?

The Answer would lead the Board to believe that *Agazzi* is opening and controlling the *Agazzi* switches so that the *Agazzi* capacitors are able to provide the reduction in near-end crosstalk. *Agazzi* does not disclose any such switch control logic. Appellants were hoping to encourage a careful and thoughtful consideration of the real teachings of *Agazzi*. In fact, *Agazzi* teaches absolutely nothing with respect to the switch control logic since there are no references whatsoever in *Agazzi* pertaining to the switch control logic illustrated in Fig. 3. Given the absence of any type of teaching whatsoever in *Agazzi*, the Answer must infer the nature of the switch control logic based upon facts which are not of record.

Finally, the Answer at page 10 states that the “fact that the compensation circuit of the present invention would function by restricting the switch or relay to one position either one of a close or open position (always) is not specifically directed to the claimed subject matter.” It appears that the Answer would lead the Board to believe that Appellants are basing their argument on switches being opened or closed. Appellants are basing their arguments for allowability on the fact that the recited features of the independent claims are not taught, disclosed or suggested anywhere in the proposed combination of cited art (and in particular *Agazzi*), and accordingly, the

requisite *prima facie* case of establishing obviousness has not been made in any Office Action to date. Therefore, the proposed combinations of cited art do not render the independent claims obvious. Accordingly, Appellants assert the rejections are improper and the pending claims should be allowed over the proposed combination of cited art.

4. Answer Fails to Address Appellants Arguments That There is No Motivation to Combine The Cited Art

The Answer at page 10 states that the “appellant argued in (see pages 23-25) that Agazzi teaches away from the claimed invention because it’s directed to a single wire pairs and therefore, no motivation to combine with the secondary references applied.” In the Appellants’ Appeal Brief, the Appellants asserted that “*Agazzi* teaches away from the present invention because *Agazzi is limited* to disclosing compensation for a two wire system and because *Agazzi* purposely avoids discussion of cross-talk induced by other wire pairs.”

The Answer at page 11 responds by stating that “it’s true that *Agazzi* is directed to a two-wire pair, *Agazzi* teaches canceling cross-talk caused by interference from one channel to another channel in (see col. 1 lines 17-21 of *Agazzi*) just as the present invention seems to solve canceling interference caused by one channel path to another channel path. Furthermore, the cited secondary reference combined with *Agazzi* are analogous and directed to solving the same problem i.e. crosstalk.” (Appellants note that the above-quoted statement by the Answer completely misrepresents the teachings in *Agazzi* for the various reasons provided hereinabove.) Appellants assert that the Answer completely fails to rebut Appellants’ arguments that *Agazzi* teaches away from the claimed invention for at least the following reasons.

First, the Answer asserts that “Agazzi teaches canceling cross-talk caused by interference from one channel to another channel.” This is a false statement. As noted above, *Agazzi* does not teach anything regarding interference from one channel to another channel because only near-end crosstalk is addressed. Near-end cross-talk, or echo, is an interference phenomenon associated with a single communication channel.

Furthermore, the Answer asserts that “the cited secondary reference combined with *Agazzi* are analogous and directed to solving the same problem i.e. crosstalk.” This is a false statement. As noted above, *Agazzi* discloses reducing near-end crosstalk, or echo. Near-end cross-talk is not the same as cross-talk caused by interference from one channel to another channel.

Because the assertions made by the Answer are based upon false facts, the rebuttal that there is no motivation to combine *Agazzi* with the other references because *Agazzi* teaches away from the claimed invention fails. Since the Answer’s rebuttal fails, it is reasonable for the Board to conclude that since *Agazzi* teaches away from the present invention, *Agazzi* is not properly combinable with the other art of record. Accordingly, the rejection of the claims under the proposed combinations relying on *Agazzi* is improper, and the rejection should be withdrawn for at least this reason alone.

Second, the Appellants asserted that “*Agazzi* teaches away from the present invention because *Agazzi is limited* to disclosing compensation by signal subtraction or cancellation in either the digital or analog domains.” The Answer has not even addressed this argument which demonstrates that *Agazzi* teaches away from the claimed invention. Since the Answer’s rebuttal fails to even address this argument, it is reasonable for the Board to conclude that *Agazzi* is not properly combinable with the other art of record. Accordingly, the rejection of the claims under the proposed

combinations relying on *Agazzi* is improper, and the rejection should be withdrawn for at least this reason alone.

Third, the Appellants asserted that “*Agazzi* teaches away from the present invention because *Agazzi* fails to disclose, teach or suggest anywhere the use of capacitors to compensate for cross-talk noise.” The Answer has not even addressed this argument which demonstrates that *Agazzi* teaches away from the claimed invention. Since the Answer’s rebuttal fails to even address this argument, it is reasonable for the Board to conclude that *Agazzi* is not properly combinable with the other art of record. Accordingly, the rejection of the claims under the proposed combinations relying on *Agazzi* is improper, and the rejection should be withdrawn for at least this reason alone.

III. RESPONSE TO NEW GROUNDS OF REJECTION

Apparently, claims 1-65 are newly rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over admitted prior art (Fig. 2) in view of *Sciacero et al.* The Examiner’s Answer, at page 9, alleges that “‘*Sciacero et al.*’, a secondary reference applied teaches cross-talk compensation means in (see fig. 3B, fig. 3D, fig. 7 and other figs.) wherein a cross-talk circuit or compensation means can provide selective connection of cancellation capacitors in (see col. 3 lines 57-59) in communication networks/systems including LAN with interference caused by mutual coupling. Furthermore, (see col. 5 line 42-col. 6 line 4), *Sciacero teaches selectively activating relays in conjunction with capacitors under control of a switching matrix to reduce crosstalk.*” (Emphasis added. Also, note that typographical errors in the above quotation are made on the part of the Answer.) Then, the Answer alleges at

page 9 that the “combination including the admitted prior art and Sciacero meets the claimed limitation without the need for Agazzi.”

Appellants’ observed above that the allegation that “Sciacero teaches selectively activating relays in conjunction with capacitors under control of a switching matrix to reduce crosstalk” is being made for the first time in the Examiner’s Answer. No prior Office Action has ever rejected any pending claim under 35 U.S.C. §103 using a proposed combination of allegedly admitted prior art in view of *Sciacero*.

Appellants noted above that claims 1-65 stand or fall together only with respect to the rejection of these claims as made in the Final Office Action. Since the allegation that “Sciacero teaches selectively activating relays in conjunction with capacitors under control of a switching matrix to reduce crosstalk” is being made for the first time in the Examiner’s Answer, Appellants assert that claims 1-65 do not necessarily stand or fall together with respect to this new basis of rejection. Appellants respectfully request consideration by the Board of the claims as grouped below.

A. Claims 1-32

Appellants respectfully submit that independent claim 1 is allowable for at least the reason that the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not disclose, teach, or suggest at least the feature of “means for selectively actuating said compensating means such that said compensating means, when actuated by said actuating means, reduces an undesirable crosstalk signal caused by a mismatch between a plurality of mutual capacitive couplings associated with said plurality of conductors” as recited in claim 1.

Clearly, the above recited feature of claim 1 is not disclosed, taught or suggested by the Appellants' allegedly admitted prior art.

Furthermore, *Sciacero* does not disclose, teach, or suggest at least the above-recited feature of claim 1. At most, *Sciacero* is limited to measuring crosstalk. This limitation is admitted in the Final Office Action. Thus, *Sciacero* fails to disclose, teach or suggest every element of the Appellants' claimed invention.

Accordingly, the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not teach at least the claimed limitations of a "means for selectively actuating said compensating means such that said compensating means, when actuated by said actuating means, reduces an undesirable crosstalk signal caused by a mismatch between a plurality of mutual capacitive couplings associated with said plurality of conductors" as recited in claim 1. Therefore, a prima facie case establishing an obviousness rejection by the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* has not been made. Thus, claim 1 is not obvious under the proposed combination, and the rejection should be overruled and withdrawn by the Board.

Because independent claim 1 is allowable over the cited art of record, dependent claims 2-32 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that the dependent claims 2-32 contain all features/elements of independent claim 1. Accordingly, the rejection to these claims should be withdrawn.

B. Claims 33-36

Appellants respectfully submit that independent claim 33 is allowable for at least the reason that the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not disclose, teach, or suggest at least the features of "a plurality of

switches, each uniquely coupled to one of said capacitive devices; and a processor controlling said switches, such that when at least one of said switches are actuated by said processor, said corresponding compensating capacitive device is connected between two conductors of a four conductor system, such that said compensating capacitive device reduces an undesirable crosstalk signal caused by a first mismatch” as recited in claim 33.

Clearly, the above recited features of claim 33 are not disclosed, taught or suggested by the Appellants’ allegedly admitted prior art.

Furthermore, *Sciacero* does not disclose, teach, or suggest at least the above-recited features of claim 33. At most, *Sciacero* is limited to measuring crosstalk. This limitation is admitted in the Final Office Action. Thus, *Sciacero* fails to disclose, teach or suggest every element of the Appellants’ claimed invention.

Accordingly, the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not teach at least the claimed limitations recited in claim 33. Therefore, a prima facie case establishing an obviousness rejection by the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* has not been made. Thus, claim 33 is not obvious under the proposed combination, and the rejection should be overruled and withdrawn by the Board.

Because independent claim 33 is allowable over the cited art of record, dependent claims 34-36 (which depend from independent claim 33) are allowable as a matter of law for at least the reason that the dependent claims 34-36 contain all features/elements of independent claim 33. Accordingly, the rejection to these claims should be withdrawn.

C. Claims 37-47

Appellants respectfully submit that independent claim 37 is allowable for at least the reason that the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not disclose, teach, or suggest at least the features of “a plurality of compensating capacitive device switches, such that one of said plurality of compensating capacitive device switches is coupled to each one of said plurality of compensating capacitive devices, wherein said at least one compensating capacitive group is selectively connected in parallel with at least one pair of conductors selected from said plurality of parallel conductors, and wherein one of said at least one compensating capacitive device switches is actuated such that at least one of said plurality of compensating capacitive devices is switched such that a first mismatch between a plurality of mutual capacitive couplings associated with said plurality of conductors is reduced” as recited in claim 37.

Clearly, the above recited features of claim 37 are not disclosed, taught or suggested by the Appellants’ allegedly admitted prior art.

Furthermore, *Sciacero* does not disclose, teach, or suggest at least the above-recited feature of claim 37. At most, *Sciacero* is limited to measuring crosstalk. This limitation is admitted in the Final Office Action. Thus, *Sciacero* fails to disclose, teach or suggest every element of the Appellants’ claimed invention.

Accordingly, the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not teach at least the claimed limitations recited in claim 37. Therefore, a prima facie case establishing an obviousness rejection by the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* has not been made. Thus, claim 37 is not obvious under the proposed combination, and the rejection should be overruled and withdrawn by the Board.

Because independent claim 37 is allowable over the cited art of record, dependent claims 38-47 (which depend from independent claim 37) are allowable as a matter of law for at least the reason that the dependent claims 38-47 contain all features/elements of independent claim 37. Accordingly, the rejection to these claims should be withdrawn.

D. Claims 48-61

Appellants respectfully submit that independent claim 48 is allowable for at least the reason that the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not disclose, teach, or suggest at least the features of “selecting at least one compensating capacitive device residing in said compensating capacitive device group; and switching said at least one compensating capacitive device such that said at least one compensating capacitive device is connected in parallel with said pair of conductors such that said mismatch is reduced” as recited in claim 48.

Clearly, the above recited feature of claim 48 is not disclosed, taught or suggested by the Appellants’ allegedly admitted prior art.

Furthermore, *Sciacero* does not disclose, teach, or suggest at least the above-recited feature of claim 48. At most, *Sciacero* is limited to measuring crosstalk. This limitation is admitted in the Final Office Action. Thus, *Sciacero* fails to disclose, teach or suggest every element of the Appellants’ claimed invention.

Accordingly, the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not teach at least the claimed limitations recited in claim 48. Therefore, a prima facie case establishing an obviousness rejection by the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* has not been

made. Thus, claim 48 is not obvious under the proposed combination, and the rejection should be overruled and withdrawn by the Board.

Because independent claim 48 is allowable over the cited art of record, dependent claims 49-61 (which depend from independent claim 48) are allowable as a matter of law for at least the reason that the dependent claims 49-61 contain all features/elements of independent claim 48. Accordingly, the rejection to these claims should be withdrawn.

E. Claims 62-65

Appellants respectfully submit that independent claim 62 is allowable for at least the reason that the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not disclose, teach, or suggest at least the features of “selecting at least one compensating capacitive device residing in a compensating capacitive device group” and “generating a switching instruction such that said at least one compensating capacitive device is connected in parallel with a pair of conductors such that said mismatch is reduced” as recited in claim 62.

Clearly, the above recited feature of claim 62 is not disclosed, taught or suggested by the Appellants’ allegedly admitted prior art.

Furthermore, *Sciacero* does not disclose, teach, or suggest at least the above-recited feature of claim 62. At most, *Sciacero* is limited to measuring crosstalk. This limitation is admitted in the Final Office Action. Thus, *Sciacero* fails to disclose, teach or suggest every element of the Appellants’ claimed invention.

Accordingly, the proposed combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* does not teach at least the claimed limitations recited in claim 62. Therefore, a prima facie case establishing an obviousness rejection by the proposed

combination of alleged admitted prior art (Fig. 2) in view of *Sciacero* has not been made. Thus, claim 62 is not obvious under the proposed combination, and the rejection should be overruled and withdrawn by the Board.

Because independent claim 62 is allowable over the cited art of record, dependent claims 63-65 (which depend from independent claim 62) are allowable as a matter of law for at least the reason that the dependent claims 63-65 contain all features/elements of independent claim 62. Accordingly, the rejection to these claims should be withdrawn.

F. Additional Argument for Allowability of Claims 1-65

Appellants note that the allegation made by the Answer that “*Sciacero* teaches selectively activating relays in conjunction with capacitors under control of a switching matrix to reduce crosstalk” is a false statement because *Sciacero* is limited to measuring crosstalk. *Sciacero* does not disclose, teach, or suggest any aspect of selectively activating relays in conjunction with capacitors under control of a switching matrix *to reduce crosstalk* as alleged in the Answer. For this reason alone, the allegation that the Appellants’ alleged admitted prior art (Fig. 2) in view of *Sciacero* renders claims 1-65 as being obvious is improper. Accordingly, the rejection of claims 1-65 should be overruled and withdrawn by the Board for this reason alone, and the application should be allowed to issue with all pending claims.

IV. CONCLUSION

Based upon the foregoing discussion, the Appellants respectfully request that the Examiner's final rejection of claims 1-65 be overruled and withdrawn by the Board, and that the application be allowed to issue as a patent with all pending claims.

No additional fee is believed to be due. However, any additional fee that may be due or required is authorized to be charged to deposit account no. 16-0255.

Respectfully submitted,



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